

REMARKS

The undersigned thanks the Examiner for the indication that claims 3-10 are drawn to allowable subject matter. This amendment seeks to incorporate the allowable subject matter into the base independent claims so as to place the application in *prima facie* condition for allowance.

The specification has been amended to insert the section headings "Background", "Summary", "Description of the Drawings", and "Detailed Description of the Invention" at the appropriate locations. In addition, the "Abstract of the Disclosure" has been revised to be a single paragraph. No new matter is added by this amendment. With particular respect to the description of the drawings, the subject matter set forth on pages 10-12, as originally filed, has been used in preparing the description.

With respect to the Examiner's objection, it is noted that Tables 1 and 2 were included with the original application papers were inserted after the "Abstract" and in front of the declaration papers. A copy of the page containing the tables is attached hereto for comparison. This amendment seeks to position the subject matter in the Tables at page 13 of the application in front of the claims, which would be more appropriate for printing purposes. No new matter is added by this amendment.

Claim 3 has been canceled. Claims 1, 2, and 4-17 have been amended. Claims 1, 2, and 4-17 remain active in the application.

Claims 1-17 were rejected as being indefinite under 35 U.S.C. 112, second paragraph. In response, the claims have now been amended to be in compliance with the requirements of 35 U.S.C. 112, second paragraph. In particular, the language "if appropriate, a dressing operation after hot rolling" and "has a bake-hardening potential after a subsequent deformation and for a subsequent temperature treatment" have been removed from claim 1, and it is now recited that a "bell-shaped" furnace is used (it being understood that bell-type furnaces are well known and have a bell-shape). Furthermore, the subject matter of claim 3 has been incorporated into claim 1, and, as per the Examiner's comments, claim 1 now recites that the strip is uncoiled and heated to a temperature T. Several dependent claims recite various compositions (St15, etc.). These compositions are

clearly disclosed in Table 1, as originally filed. Finally, claim 1 and the dependent claims use active steps (e.g., hot rolling, coiling, cold rolling, etc.).

Claims 1 and 2 were rejected as being obvious over an English language abstract of Russian Patent 21654650. This rejection is traversed in view of the amendment above. Specifically, the subject matter of claim 3 has been incorporated into claim 1. It is clear from the results reported in the specification that it is important that the uncoiled strip is heated to the temperature T, kept at that temperature T, and then cooled from temperature T at a cooling rate of $\geq 1^{\circ}\text{C/s}$. The Russian patent specification discloses in its abstract a process for the heat treatment by means of a bell type furnace which modifies the recrystallization annealing, but does not propose the reheating according to the present invention. As such, claims 1, 2, and 4-10 should now be allowable.

Claims 11 to 17 were rejected as being obvious over U.S. Patent 4,584,035 to Arai, Japanese Patent 403044423, Japanese Patent 404268057, or Japanese Patent 07216501. This rejection is traversed in view of the amendments above and remarks below.

Claim 11, as amended, is directed to a strip or sheet of cold-rolled steel showing a good planar isotropy, and, simultaneously, a bake-hardening potential. A steel of this kind was not possible before the present invention. Consequently, claim 11 is directed to a steel having a certain composition which allows the production of the isotropic steel. There is no suggestion in the prior art references to produce an isotropic specific steel by box-annealing (i.e., bell-shaped furnace annealing) which shows a bake-hardening potential. Obtaining the bake-hardening potential normally requires carrying out the recrystallization annealing by a continuous annealing instead of a discontinuous box annealing.

Arai is directed to a steel sheet for an easy-to-open can which consists essentially of 0.06 to 0.25% C, the balance being essentially Fe and unavoidable impurities. Therefore, there is a clear difference from the composition set forth in Claim 11.

Japanese Application 04268057A and Japanese Application 403044423A are directed to a hot-rolled steel. Hot rolled steels have completely different properties compared to cold-rolled steels.

Japanese Application 07216501A does not show the Ti content set forth in

claim 11, which is essential for the isotropic steel. Furthermore, the cold-rolled steel according to the cited document is continuously annealed, which, again, does not allow for the production of the isotropic steel. Consequently, there is no heat treatment after a box annealing as claimed by the present invention. The steel sheet according to the cited document is therefore structurally different from the steel strip or sheet claimed by claim 11.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephone or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson).

Respectfully submitted,



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Grade	C	Si	Mn	P	S	N	Al	Cu	Cr	Mo	Ti	V	Nb	Res
S15 (235A)	0.024	0.008	0.185	0.009	0.000	0.0017	0.009	0.008	0.014	0.002	0.001	0.001	0	0.002
S14 (431B)	0.027	0.009	0.200	0.007	0.003	0.0039	0.011	0.009	0.003	0.010	0.001	0.002	0.001	0.002
ZSE2201 (153-43)	0.023	0.019	0.180	0.009	0.005	0.0035	0.016	0.002	0.002	0.008	0.010	0.001	0	0.004
ZSE2201 (176B)	0.024	0.011	0.180	0.011	0.009	0.0043	0.007	0.011	0.001	0.000	0.001	0.001	0	0.004
ZSE340 (330-42)	0.016	0.018	0.070	0.011	0.002	0.002	0.010	0.001	0.001	0.002	0.017	0.001	0.010	0.002

Table 1: Chemical composition

Steel grade	Yield strength MPa	Tensile strength MPa	Elongation to fracture	BH ₂ MPa
S15 (EK10 130)	upto 180	270 to 330	at least 40	-
S15 (5min 500°C)	150	300	36	at least 38
S15 (2min 700°C)	190	380	30	at least 58
ZSE2201 (SZAG WS/04)	from 220	300 to 380	at least 36	-
ZSE2201 (5min 500°C)	220	340	34	at least 41
ZSE2201 (2min 700°C)	260	380	28	at least 80
ZSE340 (SEW093)	340 to 440	410 to 530	at least 20	-
ZSE340 (5min 500°C)	380	470	22	at least 18
ZSE340 (2min 700°C)	390	480	20	at least 35
ZSE220BH (SEW084)	220 to 280	320 to 400	at least 30	from 40

Table 2